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St. Bartholomew's Hospital Journal,

DECEMBER, 1901.

"Æquam memento rebus in arduis
Servare mentem."—*Horace,* Book ii, Ode iii.

Installation of the President.

ON Tuesday, December 4th, H.R.H. the Prince of Wales was formally installed as President of St. Bartholomew's Hospital in succession to His Majesty the King.

The ceremony took place in the Great Hall at a General Court of Governors.

The Prince of Wales, who was attended by the Hon. Derek Keppel, was greeted on his arrival in the square by the whole of Bart.'s in manner worthy of the best traditions of the Hospital, and was received officially on the steps of the Great Hall by the Treasurer, Sir Trevor Lawrence; the four Almoners, Mr. R. Grey, Mr. J. R. Cooper, Mr. Alderman Alliston, and Mr. G. Baker; and Mr. Cross, Clerk of the Hospital.

In the Hall the Governors, with the medical and surgical staff and certain favoured guests, were awaiting His Royal Highness's entrance, which was made amid loud applause.

Sir Trevor Lawrence having taken the chair, with the Prince of Wales on his right hand and the Lord Mayor (Sir Joseph Dimsdale) on his left, the proceedings of the Court were opened by reading of the minutes of the last General Court.

The Treasurer then delivered a speech, in which he reminded those present that the Hospital of which His Royal Highness had been pleased to accept the presidency was one of great antiquity. It was one of the oldest, if not the oldest institution of the sort within the limits of the Empire. St. Bartholomew's was founded in the reign of Henry I, in the year 1132. He believed that at that time there was no Lord Mayor of London, nor even a Mayor of London, but it was recorded that the first Mayor of London was a very good friend of the Hospital, and he scarcely need say that many of the Lord Mayors of the City had been most valued friends of the institution. What happened between the time of Henry I and Henry VIII it would be very difficult to say, but towards the end of the reign of Henry VIII the Hospital was re-founded at the instance of Sir Thomas Gresham. That was in 1544, and in the last year of that reign the estates and property of the Hospital were in a great measure restored to it. The endurance of the Hospital through all these centuries bore emphatic testimony to what was, after all, one of the characteristics of our national institutions—their singular vitality. The Hospital had been doing a great work of mercy and charity for a long course of years. There were in the institution 674 beds, and 70 beds in the convalescent home, making 744 in all. During the past year there had been, in round numbers, 6100 in-patients, 134,000 out-patients and casualty patients, and 1000 patients in the convalescent home. The average attendance of patients during the last ten years had been 150,000, and it would be difficult to calculate the amount of good done during these long years by such an institution towards the diminution of the sum total of human suffering. The patients were attended by a medical and surgical staff fifty-eight in number, and by 243 sisters and nurses, while the 519 students of the medical school rendered very valuable service by the work which they performed in the wards. The Hospital enabled the poorest in the land to obtain the advantages of the highest professional skill, the most perfect nursing, and the best treatment. Hospital and school had done their work in producing the ablest men. Harvey, whose name stood pre-eminent in the Middle Ages, was physician to the Hospital in the year 1609,

and many other distinguished men had succeeded him. St. Bartholomew's had always held a very high position in the affections of the citizens of London. It was the only Hospital for the reception of the sick within the limits of the City, and the decorations of the Hall showed how countless generations of citizens had done their best to maintain, endow, and advance the work of the institution. He wished to bear emphatic testimony to the great interest which the King had ever taken, during his long presidency of thirty-four years, in this Hospital, and to the valuable services which he had rendered to it. His Majesty had always been accessible to his predecessors and to himself as Treasurer, and had invariably shown the greatest interest in the work. He might call to mind the fact that His Majesty was good enough to preside over the Court in July of last year, and give his help towards securing part of the site of the Hospital. He should like, on behalf of the Governors, of the staff of all degrees, of the citizens of London, and of the poor patients treated within the walls of the Hospital, to tender His Royal Highness grateful thanks for the gracious and ready kindness with which he consented to the request that he would become President. They ventured to hope that His Royal Highness would long rule over them as their President, and felt confident he would show the same interest in the Hospital as had been so graciously and so constantly manifested by the King.

Mr. Cross, who performed the same office at the installation of King Edward as President thirty-four years ago, then read to the Prince of Wales the Governor's charge:

"Your Royal Highness having been elected and chosen a Governor of St. Bartholomew's Hospital, it is your duty and charge to acquit yourself in that office with all faithfulness and sincerity, endeavouring that the affairs and business of the said Hospital may be well ordered and managed, and promoting the weal and advantage of the poor, wounded, sick, maimed, and diseased persons harboured in this Hospital. To this end Your Royal Highness is now admitted a Governor of St. Bartholomew's Hospital."

The Prince of Wales was handed a copy of the charge, a Governor's staff, the rules and orders of the Hospital, and the calendar of the medical school, these being respectively tendered by the four almoners. Next His Royal Highness was asked to receive his charge as President, which was in the subjoined terms:

"Your Royal Highness having been elected President of this Hospital, Your Royal Highness is to be received as its chief ruler and Governor. Your Royal Highness is to convene General Courts at such times as you may deem necessary, or be required by resolution of the House Committee, or by requisition in writing, signed by thirteen Governors at least. And Your Royal Highness is to preside at the same, as well as at committees, and on all other public occasions that you may think proper to attend."

The Prince of Wales then took the presidential chair amid loud cheers, and made the following speech in a clear voice, which was audible in all parts of the Hall:

"Sir Trevor Lawrence, my Lord Mayor, and Gentlemen,—I thank you for the great honour you have done me in electing me President of your Hospital. I can only say that I am proud to become associated with an institution whose history dates back to the twelfth century, and which ever since then has worked for the relief of pain and suffering among the poor of the City of London. I look upon it as a very great compliment to have been asked to succeed my dear father, who, as Sir Trevor Lawrence has just told us, held the position as your President for thirty-four years. He certainly took during that time the keenest interest in the welfare of St. Bartholomew's Hospital, and he wishes me to assure you that that interest will be maintained. I fully realise the responsibilities of the trust which you have to-day confided in me, and you may certainly count upon my services being always readily given to further the good work of this institution, with which I so heartily sympathise."

Sir William Church and Mr. Langton were then presented to His Royal Highness as the senior members of the medical and surgical staff in the Hall.

Among those present were the Lord Mayor (Sir Joseph Dimsdale), Mr. Sheriff Bell, Sir J. Whittaker Ellis, Sir Reginald Hanson, Sir J. F. Ritchie, Mr. Alderman Vaughan Morgan, Alderman Dr. Crosby, Mr. Alderman Pound, Sir F. Dixon Hartland, M.P., Mr. B. L. Cohen, M.P., Sir James Blyth, the Rev. Sir Borradaile Savory, and Sir E. Durning Lawrence; the members of the medical staff; also the Matron and sisters.

Before leaving the Hall the Prince of Wales inspected the bust of Queen Victoria, one of the late Mr. Onslow Ford's last works, which has been presented to the Hospital by Mr. E. Homan, one of the Governors.

His Royal Highness then drove out of the square amid the loud cheers of those who had not had the opportunity of being present at the actual ceremony.

Weak Hearts.

A Clinical Lecture by Dr. GEE

(*Reported by* Dr. HORDER).

I AM going to lecture to-day upon some diseases of the heart not often met with in hospital practice. There are many diseases met with among private patients which we do not come across during hospital work. The reasons for this are two: the conditions of life differ in the two classes of patients; and secondly, those admitted into hospitals do not usually come for treatment until their disease seriously incapacitates them for work, so that it often happens by this time that the original disease is obscured by some late development of it. These considerations apply markedly to diseases of the heart. In hospital almost all heart affections are due to valvular disease, any affection of the muscular structures of the heart being secondary to affection of the endocardium. In private practice such cases are less often met with, many cases of heart disease being muscular or nervous from the first. Again, in hospital the cases of heart disease are great in physical signs—murmurs, thrills, etc. In private practice auscultation and percussion more often than not are of little avail unless to tell us there is nothing wrong with the heart that they can discover. They will tell us what is not present rather than what is. The indications of the disease are certain symptoms, not physical signs. Lastly, in hospital the patients with heart disease are mostly youths or persons in the prime of life. In private practice the patients with heart disease are mostly past middle life. One chief reason for these points of difference is that rheumatic fever is common among the

class of patients attending hospitals, whereas it is quite uncommon in private practice.

It is difficult to give any more distinctive name to the kind of heart disease I am describing than the one I have chosen as the title of this lecture: "weak hearts" is sufficiently descriptive for our purpose.

I. The *symptoms* may be arranged into three groups: (1) sensations referred to the neighbourhood of the heart; (2) shortness of breath; (3) changes in the pulse.

(1) *Sensations referred to the heart.*—(*a*) Sensations more or less like pain. Patients will often refuse to use the word pain in describing their symptoms. As to the severity of the pain, in many cases it is certainly very slight; in other cases there are all degrees of pain up to what must be called angina pectoris. Angina pectoris generally occurs in men, and is usually associated with an ill-nourished and degenerated state of the myocardium. In women slight attacks of angina pectoris often seem to be more of the nature of a neuralgia—what the text-books sometimes term "pseudo-angina pectoris,"—one kind of what the patients call heart attacks. During a severe heart attack the extremities sometimes become cold and blue. A condition which is also sometimes present is what is called dead fingers.

The situation in which these painful sensations are felt is not constant. (i) It may be somewhere over the heart, and here it is sometimes associated with a feeling of tightness or constriction round the chest, hence the name "angina," first given to this sensation by Heberden. (ii) Sometimes in the epigastrium, and then at first it may not be easy to distinguish this heart pain from stomach pain. (iii) Sometimes elsewhere; for instance, just below the right nipple, or between the shoulder-blades, high up.

(*b*) Palpitation. This, like pain, varies very much in character in different cases. (i) Sometimes all the heart-beats are sensible to the patients, a condition which they describe as thudding or thumping. (ii) Sometimes only a beat now and then is sensible to them; there is a prolonged diastole (during which it may be found, on examination, that the pulse at the wrist intermits), and then the heart gives a sort of kick, which is felt by the patient, and goes on beating again regularly for a time.

(*c*) Patients sometimes speak of their heart fluttering; this comes on in paroxysms, which are more or less prolonged and associated with great frequency of the pulse (tachycardia). This is another form of heart attack.

(*d*) Other indescribable sensations referred to the heart. These are very definite to the patient, but very difficult to put into words. When they are bad there is great distress, and the patient may feel, and look like, dying. "Anguish" is a word sometimes used to express this symptom.

These sensations are often brought on by exertion, such as going uphill or upstairs, by excitement, by indigestible food, by flatulence, and by other causes which the patient finds out by experience, such as slight looseness of the bowels. These sensations may occur during sleep, waking the patient up.

(2) *Shortness of breath.*—This is felt on slight exertion, such as going upstairs. Let me remind you of the dictum of a French physician, that if a patient complain of shortness of breath, don't examine his lungs but examine his heart.

(3) *Changes in the pulse.*

(*a*) The pulse may be frequent, sometimes very frequent, or even too frequent to count, when it may be shown by the sphygmograph to be 200 or more; but even with this great frequency it may be quite regular This condition is apt to occur in paroxysms, associated with fluttering of the heart, and lasting an hour or two. Sometimes the pulse cannot be felt at all, the patient seems to be dying, and the skin feels cold. These paroxysms sometimes seem due to stomach disorder; and when this is so the patient may vomit, and all is over.

(*b*) The pulse is often irregular or intermittent. It must be remembered that old people very often have an intermittent pulse without any other evidence of disease.

(*c*) The pulse is usually soft and small. But in the earlier stages of the disease the pulse is sometimes hard (increased tension), a condition which aggravates the disorder of the heart because of the resistance in the circulation which the weakened heart meets with.

II. As regards the *physical signs* there is little to say, because there is nothing definite. The heart's impulse is often weak, and sometimes it is impalpable. But the patient is often fat, and sometimes emphysematous, so that this condition cannot then be taken to mean weakness of the heart. The heart-sounds are either quite natural or are weak; any murmur, if present, is weak. By percussion some extent of dilatation can sometimes be detected; other evidence of dilatation may be that the apex-beat is sometimes found too far to the left, and that there is sometimes marked jugular pulsation, especially when the patient is in the recumbent position.

III. *The pathology or nature of these symptoms.*—We are a good deal in the dark as to this, for two reasons: in the first place, post-mortem observations are not often obtained, because the cases occur among private patients; and secondly, the patients do not die in the early stages of the disease. So what I say on this point is more or less speculative. But there is little doubt that at first it is a nervo-muscular affection, sometimes the muscular and sometimes the nervous element predominating. The muscular element is probably degeneration of the heart fibres, tending to produce a fatty heart; and this seems to occur especially in men. But in many cases the whole course and result of the disease lead us to think that this muscular element is small; therefore we assume the disease to be mainly due to defective innervation of the heart, the ner-

vous element predominating over the muscular. The fact that some of the cases recover supports this view. These cases constitutes the "pseudo-anginal" affections of text-books. They are mostly found in women. In the case of a woman we always have to ask, are not many of these symptoms purely nervous? Probably in most cases there is a combination of these nervous and muscular elements. There is one other point bearing upon the pathology of the disease; in men there is often clear evidence of arterio-sclerosis, not nearly so often in women—a condition which gives the heart more work to do, and at the same time that it is less able to do it.

IV. *Ætiology: the Conditions under which weak heart occurs.*

(1) *Age.*—The patients are usually past middle life, that is thirty-five years and after. Occasionally they are younger, thirty years; the disease very often begins about fifty.

(2) *Sex.*—We have already referred to this, and to the probability of muscular degeneration being greater in men. In women under forty you are probably right if you regard this affection as being mainly nervous.

(3) The tendency to this affection of the heart undoubtedly *runs in families.* I know a family, five members of which, as they have reached middle life, have suffered from the complaint.

(4) *Exciting causes.*—These are worries, cares, business anxieties, overwork, hurry, and excitement. Not *mere* overwork, but this accompanied by excitement, the passions or affections being involved; work on the Stock Exchange, "exciting work," not mere overwork of the brain or body. If you want an ocular demonstration of what I mean, go to Waterloo railway station at half past five in the evening. Such people say they are "living against time." There are some enigmatical sentences handed down to us from antiquity, and called the symbols of Pythagoras. One of them says, "Eat not the heart," which is interpreted to mean avoid anxious cares. Milton speaks of "eating cares." And there is a fragment of Pythagoras extant which amplifies the symbol I quoted just now, "Spare thy life, lest thou devour it by the passions of the soul." At first sight it may seem strange that these things should tell more upon the heart than upon the brain; but it is so. The passions and affections are referred to the heart more than to the head even in common language; corroding cares were what Pythagoras had in mind when he said, "Eat not the heart." Like the patient himself, his heart is in a perpetual hurry, and so becomes worn out.

Young people can go through all this without any apparent ill-effect, but it begins to tell after the prime of life. The disease is very common in business men who have lived a toilsome exacting life; in those who have speculated or gambled; in men who have worked up a large business from small beginnings, and have become rich, perhaps excessively rich; and the sad thing is that just as they reach the time which they have looked forward to for enjoying their wealth their heart gives way, and thenceforth they can enjoy nothing. The meals of such men are hurried and irregular, they have no lunch, and they are in the train when they ought to be at dinner. Most of them live out of town and hurry to catch their morning train. They have to get up early in order to be at business. There is no quiet breakfast, nor any time for a short rest after it. And many of these men are so gluttonous for work, it is to them like alcohol to others, they are always busy and cannot keep quiet. Not satisfied with their business, they load themselves with gratuitous work; they are churchwardens, secretaries of various societies, etc.; and this kind of work takes them out at night when they are already tired by their day's business. They often indulge a great deal too much in alcohol and tobacco; and tobacco excess is often more difficult to deal with than over-indulgence in alcohol. Sometimes they are gouty, and then they are almost sure to suffer from those arterial changes of which I spoke just now.

I have spoken thus fully of business men because they will make up the bulk of your patients. But professional men suffer in the same way, particularly medical men and clergymen. Some medical men live a life which is simply deplorable; there is never a moment by night or by day which they can call their own. I have known men flee from this kind of thing at less than twenty-four hours' notice, possessed by the one dominant feeling that they must get out of it at once. Clergymen also suffer nowadays; "even Sunday shines no sabbath day" to them,—and the same holds for doctors.

In ladies the same thing happens under different circumstances, as domestic worries, and often in comparatively young women, about thirty to thirty-five years of age, when the cause is apt to be nursing, especially nursing some relative at home, year after year, with broken rest; the question of the emotions comes in again and tells upon the heart.

(5) But hearts like this are sometimes found in people who lead quiet temperate lives, with no special anxieties. The exciting cause here is that we must die of something, and must grow old,—and people do not usually grow old altogether; one organ grows old first, sometimes the arteries, sometimes some other organ, sometimes the heart, in which case we are apt to call it a "*senile* heart;" the heart is old, worn out. It is the beginning of the end.

(6) For the last twelve years rather a common cause of this form of heart disease has cropped up in the shape of *influenza.* It occurs especially in people past middle life, and is not uncommon. It sometimes occurs during, and more often after, the attack. It is sometimes severe, and there may have been no affection of the heart before. When we remember the way influenza lays hold of nerves it

is not improbable that it may affect the nerves of the heart sometimes. The heart's action is feeble; the pulse very feeble, very frequent or very infrequent, irregular and intermittent; there is palpitation and pain of all kinds about the heart, sometimes pain exactly like that of angina pectoris. The heart attack may come on acutely, and may be, in rare cases, fatal during the early stage of influenza. Most people who have suffered thus never wholly recover, the heart being left permanently weak; you often hear them say, "I was quite well until I had the influenza, but have never been right since."

In hospital work rheumatic fever is the commonest cause of heart disease, but is uncommon among the well-to-do, and therefore heart cases are not of the same sort in private practice as in hospital.

(7) *Strained heart.*—This condition usually comes on suddenly, during severe exertion. It may occur at any age, in children even; but it is most often found in people about the prime of life. To mention two cases: a lady of thirty years, during swimming, was seized with a bad heart attack; a clergyman of thirty-six, playing hockey, experienced sudden pain over the heart and "collapsed." Golf, gymnastics, and what is unquestionably a more common cause, bicycling may lead to the same result. Bicycling is quite a common cause in oldish people, for whom it is a dangerous occupation except in a mild form; cycling fast or climbing hills is risky. Not a few old men have had a sudden syncopal attack whilst bicycling, and died a few hours after. But excessive bicycling may lead to this result at any age, even under twenty, and particularly in females; but sometimes in males also; still, it is more dangerous in young women. I remember a young woman who was very strong, riding in a bicycle race,—both excessive and exciting work,—and all at once she had to give up because her "heart was all over the place." These strained hearts seldom recover completely, no matter at what age the condition begins. I know myself a number of people who have had to give up bicycling because their hearts could not stand it. In Hyde Park six years ago it was quite the fashion for people to bicycle in the mornings; you do not see it now, and there are a large number of cycles stored away in cellars because their riders have had to give up the exercise.

(8) *Tobacco.*—Of this as a cause of weak hearts there is no doubt. This is the "smoker's heart." The same may be said of *tea*.

In many of the patients, especially women, there are other evidences of nervous debility or neurasthenia: constant headache or backache; being very easily fatigued,—the chief evidence of nervous debility; an atonic form of dyspepsia; sleeplessness; low spirits.

V. *Course of the disease.*—People past middle life, I am disposed to say, never wholly recover. But if they take care, and give up the cause of the trouble, they may live many years and at last die of something else. There are many people who know they have "a heart," and that there are many things they cannot do. The disease tends to be progressive, especially if not treated. The disease ends in one of three ways: (i) by the development of unmistakable angina pectoris with all its dangers; (ii) as fatty heart with its tendency to syncope; (iii), and most often, as dilated heart with dropsy,—this being the condition under which we meet with the disease in hospital wards. For occasionally we see this form of heart disease in hospital, but it is at this stage. There are no signs of valvular disease, no history of rheumatic fever, and the condition suggests this diagnosis; the patient being poor, no care has been taken, and the disease has ended in dilated heart. I believe a woman at present in Hope illustrates this fact. I speak with doubt, because these dilated hearts act so feebly that the patient may have extensive valvular disease which does not yield a murmur. Sometimes all three conditions concur, an event which soon brings about a fatal ending. The disease is usually slow, lasting for years; beginning at about forty-six, a patient may go on without materially changing his mode of life, and die, generally with dropsy, at sixty. Though the progress is usually slow, yet if it begins in oldish people it is often rapid; when due to influenza it may be as brief as two or three weeks, and even if occurring without obvious cause the end may come within two or three months of the first symptom.

VI. *Treatment.*—We can only set before the patients what we should *like* them to do. Many cannot carry out the advice; others will not. They must lead a very quiet life, with no hurry of any kind. Exercise is necessary, but must be moderate,—there is none better than walking, and unless the patient is very ill no harm whatever can come from it. Exclude bicycling altogether. It is very important to attend to the digestion; so close a sympathy is there between the heart and the stomach that if the stomach is at fault the heart is sure to suffer. Patients must avoid tough meat of all kinds, as well as other hard foods like potatoes and carrots. Inasmuch as the teeth are often bad, because the patients are getting on in life, it is necessary to see that the food is soft and tender; you may order it to be pounded and rubbed through a sieve. Bread is generally bad for these people, not being very digestible. Good crisp biscuits, that will almost break up without chewing, should be substituted. They must not eat in a hurry nor over-eat; and many elderly people, though they do not eat more than when they were young, eat the same amount and cannot digest it, and this is over-eating for them. If they are wise they will not take so much as when they were young and vigorous; but this is a failing not uncommon with men. Most people drink too much at meals. These patients especially should not drink more at these times than is necessary, and not at all

unless thirsty. As a rule nitrogenous food, such as meat, fish, milk, and eggs, is better than too much carbohydrates. If the patients are fat, and they often are, diminish it if possible. If they lose a stone or so in weight, all the better. They should be very temperate in respect to alcohol; a little does no harm, but any excess is bad. Alcohol is not so pernicious as tobacco or tea, especially tobacco. Tobacco is such a tyrant that it is extremely difficult for a man who has the habit to do without it; but you can get it diminished very much, though with a great effort. I generally tell them that tobacco never did anybody any good, and they usually confess that I am right, only, as they say, they like it.

In the earlier stages of the disease get the patient away from exacting business of any sort, if possible for six months' holiday. It is better that he should leave home, but where he goes to depends upon the time of year. What people call a bracing climate suits much better than a relaxing one. Almost any temperature will do, provided it is not too warm. The east coast of Scotland is an instance of a good place, the south of France an instance of a bad one. A moderately high-lying place is good, but there must be no climbing, at first at any rate, not even rapidly going upstairs. Some time ago I met with a very singular instance of this. A gentleman aged forty, suffering from this sort of heart, went to Abyssinia for a change. He knew his heart was weak. Abyssinia is a high mountainous place, a kind of table-land; so long as the patient was not more than one or two thousand feet above sea level he was very much better. Then he thought he should like to see the king; but this meant going to a place that was much higher. However, he started, but before he got there he was so bad he had to come down again. Apparently it was nothing save going too high that did the harm. Unfortunately, after coming down he was no better, but had lost all the benefit he had got before. As the patient improves there is no objection to a little cautious climbing, up to about a thousand feet; and when able to do so the improvement may be considerable. Noticing this, some people recommend climbing for these hearts, and not only for these but for aortic regurgitation and such like more serious organic changes. Treatment of this sort has been justly called a selection of the fittest; some are made better, some worse. English people often want to go abroad; it is a prejudice, but not necessarily a bad one. In the case of invalids the question of food must be borne in mind; in many Continental hotels it is very bad. There is one place in Germany which every one has heard of,—I refer to Nauheim. All sorts of heart cases go there, many on their own initiative, without any medical advice. The principles of the treatment there are saline baths and certain exercises. In England the Nauheim treatment has been extensively employed by Dr. Bezly Thorne. Dr. Thorne tells me that he considers the main object of this special treatment to be restoration of tone to the heart muscle, both in cases of primary heart weakness and also of failure of compensation for valvular defects; and a main indication for treatment to be found in a pulse of unduly high tension. The baths and exercises relax the arteries, and thus relieve the weak and labouring heart. But the condition of the arterial coats and of the vaso-motor mechanism have to be taken into consideration. Pathological changes in the former, and central or other interferences with the latter, may retard or prevent the action of this method of treatment. My own experience of the treatment is small; but I know enough to say that patients should not undergo it excepting by medical advice and under careful supervision.

As to drugs, I generally prescribe strychnine in small doses, as a sixty-fourth of a grain; big doses are bad, sometimes producing unpleasant sensations about the heart. Small doses of digitalis often suit. If there is any hardness of the pulse small doses of sodium nitrite, not more than a quarter or half of a grain, may be given. All three of these drugs may be given in one mixture if required. If there is much pain the best remedy is arsenic, again in small doses.

If people think there is anything the matter with their heart it is your duty to promise improvement, as you honestly may do if they will submit to treatment; there is no tonic equal to hope. Really bad cases had better take no exercise at all, and should live on one floor so as not to go upstairs to bed; a bath chair should be used instead of walking. The worst cases must be kept altogether in bed. If there be dilated heart and dropsy you must treat the patient accordingly.

The Evolution of the English Medical School.

A Paper read before the Abernethian Society, on Thursday, November 7th, 1901.

By J. A. NIXON, M.B.Cantab.

MR. PRESIDENT,—When I offered (may I say somewhat rashly?) to read a paper before this Society, I selected a subject which appeared to me to be capable of being made not wholly uninteresting. For some time past the history of the beginnings of medical education had claimed a good deal of my attention, and I fondly hoped to be able to turn the results of my inquiries into a coherent story; but I feel to-night that, although my researches have been a most engrossing occupation as far as I am concerned, to you it may be but a half-digested compilation that I am offering. It is not my intention to deal only with our own famous institution, though had I been able to follow up the history of St. Bartholomew's I should indeed have been covering the whole story of the rise and progress of English medicine, but the point of view would have been too confined, and the vista too limited. I propose rather to treat of the development of medical study in England, trying in particular to show how the great schools, of which this is by no means the least,

came into being, and through what stages they have passed before arriving at the condition in which we find them to-day.

How the medical art arose, and by what steps it became an honoured pursuit, are almost lost in the obscurity of ages. The earliest book of which we have any knowledge was a work on Anatomy, which is mentioned as being of great antiquity, and is quoted from in an Egyptian papyrus of B.C. 200. Teta was an Egyptian king who reigned about 4000 years before the Christian era, and he seems to have possessed something of a medical education. The Egyptian priests were the official embalmers, and they seem to have profited by their opportunities to study anatomy. The Egyptian monarchy was always hierarchical in character, and it would not be far short of the mark to describe the hierarchy as being in part a medical one.

In Egypt there were no less than four schools in which anatomy was taught—Memphis, Seis, Heliopolis, and Thebes. Later the school at Alexandria became the leading one of the whole world. This was a great centre of learning of other kinds than medicine, and was thoroughly cosmopolitan, since Alexandria was the hub of the world's commerce. The school lasted up to the third century B.C., when its lustre waned for a while, but under the patronage and active interest of Ptolemy Soter it regained its position, and held it until close upon the fall of the Byzantine empire.

Greece meanwhile did not neglect medicine while encouraging the development of art and literature. Æsculapius may or may not have been historical; probably a man skilled in the healing art whom subsequent generations deified. There is a tradition that his two sons were surgeons with the Greek army at Troy. He is supposed to have flourished about 1250 B.C., and after his death certain places were devoted to the Æsculapian cult, and the famous Temples of Health were inaugurated in his honour. These were usually situated on some spring or river, and under the charge of the priests of Æsculapius. Apart from these priests there were the lay physicians, the Asclepiadæ. Possibly they had originally been the assistants of the priests, but at some time or another they emancipated themselves, and shaking off the priest's yoke travelled afar, learnt from the scientific men of other countries, and formed something like a guild of physicians.

Hippocrates was the bright star in this guild, and he added to a purely philosophical branch of learning the fruits of observation and experience.

In these societies, founded by Æsculapius or named after him, the first germs of organised teaching are found; the guilds, like our more modern ones, preserved and handed on from generation to generation the secrets of the profession, given orally no doubt at first, from father to son or teacher to pupil.

Instruction in these schools began at an early age, and was imparted not only to those connected by birth with the teacher, but also to those whom he thought good to adopt for a honorarium.

Such schools existed in Rhodes, Crotona in Lower Italy, Cyrene in North Africa; but the most famous were at Cnidos in Asia Minor and at Cos, and this last was the school of Hippocrates, who was born B.C. 460; his teacher had been his father, and his mother was a midwife; he was the creator of profane as opposed to sacerdotal medicine, and of public as distinguished from secret practices.

The school of Alexandria was a foreign transplantation, its revival in the third century being due to Grecian influence entirely. Here was centred the literature of the civilised world, its library being increased till it finally contained 700,000 rolls of papyrus, its museum containing preparations of anatomical, zoological, and botanical specimens, and all these free and accessible to teachers and students. Here was the foundation of our scientific teaching, and from this school the study of anatomy originated. Herophilus of Chalcedon (B.C. 380—335), again the son of a physician and a midwife, whose *torcular Herophili* makes his name familiar to-day, and Erasistratus—physician to Ptolemy Philadelphus—B.C. 284, were alumni of this school.

Amongst the Romans there was no medical profession, it was left to the Greeks and the Jews, and there was in Rome an innate contempt for professional medicine. Yet the advantage of having medical advice for his family and slaves induced the well-bred Roman to buy in foreign lands slaves who had been educated to medicine, or to allow his own slaves to be so educated.

Public medical officers were appointed, and the profession became sufficiently important to form its guilds and corporations, and the education of the younger generation was left in their hands.

The Alexandrian school founded human anatomy, but in obedience to popular prejudice this was abandoned for the dissection of the lower animals.

In the writings of Celsus, who, by the way, was a Roman, not a physician by profession, much of the substance of lost writings, especially those of the Alexandrian age, is preserved to us, his best contribution to medical art being his *Descriptive and Operative Surgery*, showing the advanced state to which the accurate study of anatomy had brought the Alexandrians.

Galen, A.D. 131—201, was of the Eclectic School, who studied anatomy first at Pergamos, later at Smyrna (in his twenty-first year), and also at Alexandria, travelled far and wrote much,—in fact, he was the *savant* rather than the practitioner; yet so widely were his writings read that for 1500 years, among Christians and Arabians, he was the acknowledged authority on—nay, the dictator of medicine.

During the decline of the Roman empire, which had absorbed all the centres of learning, interest in science waned also, despite the efforts of the later emperors to revive it by their patronage, so that even when Theodosius II founded an academy at Constantinople with thirty-one professors no benefit resulted, the public taste had sunk so low; magic took the place of scientific medicine. Medical lore drifted into other directions, and the credit for its preservation belongs not a little to the Arabian physicians.

During the sixth and seventh centuries civilisation reached its lowest ebb, the arts were neglected, and needless to say the sciences even more so. Only a few of the clergy could read and write, and the ecclesiastical *savants* did not occupy themselves (even if they had the capacity) with the writings of the heathen,—in fact, to consult their works was a deadly sin.

But about the eighth century a wave of reviving learning appeared in the time of Charlemagne, and the chief impulse came from the Arabians of Spain and the English.

The struggles in Central Europe of the Goths, Germans, Vandals, and Huns had plunged all the seats of ancient learning into a state of chaos, from which its recovery could only be slow. Yet fragments of the ancient civilisation and learning survived, as we have seen, among the Arabians, who were in turn indebted to the Byzantine school, where the Greeks preserved a science of medicine based on antiquity.

In this Byzantine empire one teacher stands out, Paul of Ægina, A.D. 625—680; he had studied in Alexandria before its fall in A.D. 641, and passed most of his life in Egypt and Asia Minor; he was an acknowledged teacher, his advice was sought from long distances, and he was a bold surgeon; of the state of education, however, at this time we know but little. At Athens the eastern students enlisted scholars for their own favourite teachers from among the newly arrived students, and drummed up recruits for their societies.

The better physicians of the Eastern empire were, as a rule, educated at Alexandria, though travelling abroad afterwards they often attended Asiatic schools. Many received instruction as private pupils of famous physicians, and completed the course at Alexandria.

Hospitals were probably first instituted about A.D. 335, after the decree of Constantine closing the Asclepieia and other pagan temples. Helena, mother of Constantine, was active in founding such institutions at Constantinople, Jerusalem, and other cities, Basilides hospital at Cæsarea, A.D. 373, being the first whose foundation is recorded.

In the Græco-Arabian period the Jews once again entered as a controlling factor in the world's culture and civilisation; many of the so-called Arabian physicians were Jews, and many Jewish schools of learning were founded in Asia to which Arabians and Persians resorted, and in this manner a connection was established between the East and the West.

Meantime Christianity, in the West, had from motives of humanity preserved among the monks some relics of the healing art, and the Benedictines were foremost of all the orders in maintaining hospitals, *e.g.* Mt. St. Cenis, A.D. 825, and Great St. Bernard, A.D. 980. These institutions were under the direction of the Church; in only a few cases were regular physicians employed, and there is no doubt that they did little to foster any progress in medicine, for their methods of cure were founded on the grossest superstition; and so degrading to the monks themselves did their tenets become, that an indulgent Church was compelled, during the twelfth and thirteenth centuries, to forbid the study or teaching of medicine to the higher clergy.

It was from the Benedictines in England that Albin Alcuin (736—804) came to the court of Charlemagne, and of him the following account is given:—He was a learned Anglo-Saxon theologian, who happened to be at the court of Charlemagne as commercial envoy from one of the kings of the Saxon heptarchy, when two Scotsmen, Claud Clement and John Melrose, also arrived in the capital (either Paris or Aix-la-Chapelle) with some English traders.

Amidst the ordinary cries of the market-place the townspeople were surprised to hear the Scotsmen calling out, "Who will buy knowledge? for we have got it to sell." The people thought the men mad, but the king, hearing of the incident, sent for Clement and Melrose, and asked them whether they really had knowledge to sell, and what they asked for it. They replied that they had, and its price was "a place to teach in, pupils to learn, and needful food and raiment." Charles came to terms with them, established a Schola in his palace under the charge of Clement and Alcuin, and taking Melrose with him to his Italian wars settled him as superintendent of a Schola at Pavia, afterwards the university of that city.

Charlemagne was a patron of learning, and founded or assisted in the development of many centres of education in his empire, Paris, Pavia, Florence, Cremona, etc.; and he ordained that Physic should be taught among other subjects.

How far the Arabian schools served as models is not known, but their influence is not improbable seeing that Charlemagne had intercourse with the Arabians. The glory of Monte Cassino as a medical school far outshines anything that had gone before, short-lived as it was; it owed its origin to the Benedictines. The monastery had been founded by St. Benedict; it was a monastic infirmary where practice ranked above theoretical instruction, and of course miracles could not be kept out of the pharmacopœia; still there are traces in history of a monkish school of medicine at Monte Cassino, from which the famous school of Salernum arose, the first of all schools to confer degrees in medicine. Concerning its origin one tradition is extant,—not confirmed, it is true, by any other authority, but being a narrative written within fifty years of the event by Leo Marsicanus, one of the monks who was afterwards Cardinal Bishop of Ostia (1101), it has obtained fairly universal acceptance. He ascribes the development of the school to one Constantine, a Carthaginian, who after enriching his mind with the medical lore of Asia by many years of Eastern travel, and being in peril of his life among his countrymen as a necromancer, fled to Italy, took refuge at Salernum, joined the medical school there soon after 1050, and attracted many students; among whom at some time in the eleventh century was "a woman learned in medicine."

The teachers at Salernum were called Magistri; they were probably at first selected by chance, and, shall we say, on their reputation among the students as coaches.

There is no vestige of evidence that the State recognised Salernian teaching or sanctioned Salernian certificates of study before the twelfth century, but in 1140 Roger, first king of united Sicity and Apalia (Naples), issued a decree in favour of the school, granting "that its own statutes should have the force of law." This appears to be something confirmatory of pre-existing conditions, and is probably comprehended in a more precise decree contained among the famous statutes of Frederick II, Emperor of Italy, and Roger's grandson, in 1231: "No one pretending to the title of physician shall practise or cure unless first approved at Salernum, by a decision of Magistri at a public sitting; he shall present himself with letters testimonial as to his trustworthiness and sufficient skill from the Magistri as well as our officials before ourselves, or in the case of our absence from the realm before our vicegerent, and receive from us or him a licence to practise." This was the first "charter" given to a university making the designation *Magister* a privileged title or degree; but both the university and the degree pre-existed with *de facto* consuetudinary rights, which the monarch simply adopted, legalised, and checked.

At or soon after the foundation of a university at Salernum two universities came into being in England. "The zeal of some men to instruct, and the thirst of others for instruction, who drew towards one another by a new-born instinct, established schools in a wilderness of ignorance, achieved fame for them, gained for them consuetudinary rights, and thus offered to monarchs objects of favour, which it became the peculiar honour and glory of the Crown to adopt and consolidate."

Whatever traditions may be now in vogue at the respective universities, Oxford clearly had a school of secular canons, established by the city governor, Robert D'Oyley, before 1087, where William the Conqueror's third son, Henry, was educated; while Cambridge has a record written only fifty years after date of the establishment of a school by five monks who were sent from the monastery of Peterborough in 1109.

Meantime, while Salernum and Montpellier were rising to the zenith of their fame, one of the Prebendaries of St. Paul's Cathedral, Rahere by name, had been travelling to Rome and suffered there from malarial fever. He, owing to a dream during his convalescence, on his return to England founded in 1123, on land which he obtained from Henry I, the Priory and Hospital of St. Bartholomew.

At first the Hospital was little more than the monastic infirmary, the treatment being in the hands of the monks, who themselves had no special claims to a medical education, but may have availed themselves of their opportunities to devote part of their attention to medical literature, which was entirely Galenic, for since Galen's time no one had ventured to set up an opinion. And this spirit was fostered nowhere better than in the monasteries where reverence for the authorities overcame any desire for original research.

But we have very early knowledge of the state of learning in our Hospital, thanks to the investigations of Dr. Norman Moore, and his translation of the *Breviarum Bartholomæi*, composed by a Yorkshireman, John Mirfield, one of the monks in the Priory, from which it is evident that he was a regular attendant on the clinical practice of the Hospital under some one who was in a position of authority, and to whom he refers as "Magister meus."

In the eleventh and twelfth centuries, as we have seen, the practice of physic was in the hands of the clergy, and John of Salisbury gives us an outspoken summary of their methods and attainments. He says of the physicians "that the professors of the *theory* of medicine are very communicative; they will tell you all they know, and perhaps out of their great kindness a little more. From them you may learn the nature of all things, the cause of sickness and health, how to banish the one and preserve the other—for they can do both at pleasure. They will describe to you minutely the origin, the beginning, the progress, and the cure of all diseases. In a word, when I hear them harangue I am charmed; I think them not inferior to Mercury or Æsculapius, and almost persuade myself that they can raise the dead. There is but one thing which makes me hesitate; their theories are as directly opposite to one another as light to darkness. Two contradictory propositions cannot be true. But what shall I say of the practical physician? I must say nothing amiss of them. It pleaseth God for the punishment of my sins to suffer and fall too frequently into their hands. They must be soothed and not exasperated, that I may not be treated roughly in my next illness. I dare hardly allow myself to think in secret what others thus proclaim aloud." And later as regards their education he says, "They soon return from college full of flimsy theories to practise what they have learnt. Galen and Hippocrates are continually in their mouths. They speak aphorisms on every subject, and make their hearers stare at their long, unknown, and high-sounding words. The good people believe that they can do anything because they pretend to all things. They have only two maxims, which they never violate: Never mind the poor—Never refuse money from the rich."

The monks found the profession so lucrative that they deserted the monasteries and neglected their religious duties in order to embark on the study and practice of physic. To such an extent did this spread that the Council of Tours in 1163 forbade the monks staying out of their monasteries above two months at a time, or to teach and practise physic. But this prohibition did not touch the secular clergy, and many high dignitaries in the Church, bishops, etc., acted as physicians at court.

Their education was acquired at Salernum from the writings of Rhazes, Avicenna, Avenzoar, and other Arabian authors.

In the annals of the Church at Winchester, Richard Fitz Nigel, who died Bishop of London in 1198, is said to have been apothecary to Henry II.

At this time (end of twelfth century) the separation of physicians and surgeons into two separate classes began owing to the action of the Popes, who, jealous of such an interruption of the duties of the clergy, made several attempts to prohibit priests from the performance of surgical operations. The priests, however, not being willing to surrender surgery as a whole to their Jewish rivals, nor to ignorant laity, made use of their barbers, who having previously been employed to shave the heads of and to perform minor operations, were now instructed to work entirely under the direction of their masters.

These men, qualifying themselves by the instruction of the clergy, assumed the title of barber-surgeons, and became a confraternity or fellowship. The more enlightened of the barber-surgeons, again in the march of knowledge by attending lectures and practising dissection, began to spurn such a degrading conjunction, and at last freeing themselves from the barbers became a college of surgeons.

From this date (beginning of fourteenth century) the two branches remained widely separated. Surgery was preserved as a handicraft by one of those guilds or corporations which in London especially, but also elsewhere, maintained the vitality of the arts and crafts;

whilst physic continued to be a branch of higher literary education, which was studied at the universities or monastic centres.

In the guild of barber-surgeons itself the members who had entirely ceased to act as barbers very soon formed a distinct class in the corporation.

The guild existed as early as 1308, though it did not attain to the rank of a company till many years later. There are but scanty records of its doings at this date, and the only surgeon—in fact, the first surgeon of whom we know anything—does not appear to have had any connection with the guild. This was John of Arderne, who was born in 1307; he practised in Newark from 1349 to 1370; he describes himself as "Chirurgus inter medicos." Was he the first specialist in surgery? Of his place of education we know nothing, he himself gives no information on this point; he does not appear to have studied at either of the ancient universities, though it is evident from his literary attainments—he wrote in Latin a treatise on fistula in ano—that his education was an exceptional one at that date.

Fistula was his special study, and he travelled over most of England, operating on patients of high degree, taking by the way enormous fees for his pains.

He tells us in his book the names of his most notable patients: "Sir Reynald Grey, Lord of Wilton in Wales; Sir Henry Blakborne, clerk Tresorer of the lord Prince of Wales; Adam Gumfray of Chesterfeld, by side Nottyngham; Sir John Masty, parson of Hopporte in Chestre shire; John Colyn, Maire of Northampton; Hew denny, ffisshmonger of London," and many others.

Contemporaneous with him was John of Mirfield, who represented clinical study at Bart.'s; and just before, in 1320, flourished John of Gaddesden, mentioned by Chaucer, educated at Oxford (Merton College), Doctor of Physic and Prebendary of Ealdland in St. Paul's; author of the Rosa Anglica, who treated Edward II's son for smallpox.

Whether he ever came to our Hospital is not known, but if he was prebendary at St. Paul's it is not unlikely.

Otherwise of fourteenth century education there is little to tell. At the universities a certain number of monks resided for the purpose of study; there were but few of them, and they reproduced in the earliest collegiate institution what they could of the monastic rule.

Still they were there solely for the purposes of education, and youths selected from the monasteries who showed any aptitude for learning were sent on to Oxford or Cambridge, where doubtless three courses were open to them, all purely literary—divinity, classics (though scarcely revived at this period), and medicine.

Here they read the authors; no practical application of what they read was possible, and the books, such as they were, were merely transcripts of Galenic tradition, either taken direct from that author or filtered through the Arabians.

(To be continued.)

Three Cases of Recurrent Hæmaturia occurring in One Family.

By W. H. W. ATTLEE, M.B.Cantab., M.R.C.S.

THE following cases of hæmaturia are interesting from the fact that the patients affected are three sisters, the only members of a family. The father died aged thirty of uræmia, and the mother seems to be a perfectly healthy woman.

CASE 1.—A. C—, æt. 4½ years, was admitted into hospital on July 10th, 1901, suffering from hæmaturia with the following history:

On April 13th she was admitted to a children's hospital suffering from hæmaturia. She was an in-patient for three weeks, and is said to have been discharged improved but with still a trace of albumen in the urine.

On July 6th the child seemed again unwell, and complained of pain in the calves of the legs. The urine was then seen to be smoky.

She is said to have had several fits since she was eleven months old. The fits begin suddenly, the eyes are fixed and she becomes unconscious, and occasionally passes urine under her. She has never bitten her tongue. There is no history of scarlet fever or of anything to suggest that she has had that disease.

On admission she was to all appearances a perfectly healthy and well-nourished child. There was nothing abnormal to be found in her circulatory system, and there was no œdema. There was nothing to be felt to suggest any new growth. Urine smoky, 1020, acid. Cloud of albumen, microscopically blood and granular casts. No crystals.

She remained in hospital until July 31st. During that time she always seemed perfectly well, never had any fits, and nothing was discovered to suggest any cause for the hæmaturia. She passed on an average about twenty ounces of urine per day. It was always acid. The specific gravity varied between 1026 and 1015. It always contained albumen and blood, usually in small amount, and occasionally granular casts were found.

No crystals were found, and there was nothing to suggest the presence of a stone. She was discharged with the urine in the same condition.

On November 11th she was again admitted. The history was that she had seemed quite well till November 6th, when she began to vomit frequently. On November 8th she had a fit, in which her eyes were fixed, her lip was bitten, and she was unconscious for forty minutes.

The first time she passed urine after the fit it was smoky. On November 9th she was feverish, had some bronchitis, and there was much blood in the urine.

On admission there was still some bronchitis, but the temperature was normal. The child seemed very well except for some cough. Urine 1015, bright red, acid, much albumen, and microscopically was found to contain blood and granular casts.

The bronchitis cleared up, and the child seemed perfectly well and gained weight, and the blood decreased until there was only a faint trace. On December 29th she suddenly complained of not feeling well. She had no pain and no fit. The temperature rose to 101·8°, and about six hours afterwards the urine was again bright red. The temperature kept up for two days, then became normal and continued so. The blood decreased to a mere trace in three days, and then remained stationary.

She was discharged on December 31st in the same condition.

CASE 2.—K. C—, æt. 5½ years, admitted into hospital on May 20th, 1901, with the following history. On May 15th she went to school and seemed perfectly well. On May 16th she complained of headache and some pain in the right side of the chest. She vomited three times on that day. She continued out of sorts until she was admitted. There was no history of scarlet fever.

On admission she was found to be a healthy-looking, well-nourished child. The temperature was 100·6°, and she had a slight cough. There were a few moist sounds over the bases of the lungs, but no other abnormal physical signs.

There was no œdema, and nothing abnormal to be felt in the abdomen. There were no signs of cardiac hypertrophy, and nothing abnormal in the pulse.

The urine was smoky, acid, 1017, contained a cloud of albumen and a considerable quantity of blood. There were no clots. Blood-corpuscles and blood-casts were found, but no crystals.

After five days the temperature was normal and remained so, the moist sounds in the chest disappeared, and she seemed perfectly well. She continued to pass blood in diminishing quantities until June 6th, when this ceased. The urine continued to contain a trace of albumen until her discharge on July 9th.

She was seen again in December, and the urine at that time contained a cloud of albumen and blood, but nothing else was found under the microscope.

CASE 3.—E. C—, æt. 2 years and 4 months, admitted July 4th, 1901. The history was that on June 26th she vomited frequently and became feverish. On June 27th she had a convulsion. She continued to be feverish until her admission. There was no history of scarlet fever.

On admission she was a fat, perfectly healthy-looking child with rosy cheeks. Temperature 101°. There was no œdema and nothing abnormal discovered in the circulatory system. There was no tenderness or resistance in the abdomen. The urine was clear, acid, 1020, contained a cloud of albumen but no blood.

The temperature was normal on May 30th and 31st. She vomited twice on May 31st, and again frequently on June 1st, when her temperature rose to 101·8°. On the evening of that day the urine was found to be loaded with albumen and to contain much blood. The urine was scanty, but it was impossible to measure the exact amount.

The pyrexia continued until June 4th, when the temperature gradually fell to normal. The amount of blood rapidly decreased, and on June 6th there was none to be found in the urine. She continued to pass a trace of albumen until her discharge on July 8th.

During her stay in hospital specific gravity averaged 1017. The urine was always acid, and she always passed a fair quantity after June 5th. On two occasions granular and epithelial casts were found under the microscope, but never any crystals.

On January 1st, 1902, a skiagraph of the abdomen and pelvis was taken. It was not very satisfactory owing to the difficulty experienced in keeping the child still, but nothing could be found either in the skiagraph or on the screen to suggest the presence of a stone.

No satisfactory cause has so far been found to account for the condition.

The following various suggestions have been made by those who have had the opportunity of seeing the cases:

1. That they are cases of nephritis following scarlet fever. The objection to this is that there is no evidence whatever that the children have ever had scarlet fever, and there is no history of any possibility of infection. The general condition of the patients does not in the least suggest that they are suffering from nephritis. They never seem to be particularly ill, have never had any œdema, and have no cardio-vascular changes.

2. That they are suffering from stone in the kidney. No abnormal crystals have been found microscopically, and there has been no pain suggestive of renal colic. The youngest sister has been examined with the X rays with a negative result.

3. That the hæmaturia is caused by Raynaud's disease. There has been no sign of Raynaud's disease in the fingers, toes, ears, or elsewhere.

4. That some form of new growth in the kidney is the cause. Nothing has been found *per abdomen* or microscopically to bear out this suggestion.

5. That all the children are suffering from tuberculous disease of the kidney. All the patients appear to be so well and healthy that it is difficult to believe that they are suffering from such a severe disease.

6. That the fits from which the second child has suffered are epileptic in character, and that the hæmaturia is simply an exaggeration of the albuminuria which is frequently found after an epileptic fit.

7. That the patients are suffering from paroxysmal hæmoglobinuria. Against this is the fact that perfectly formed red blood-corpuscles are seen microscopically.

I am indebted to Dr. Alexander Haig and Dr. Arthur Davies, under whose care the children have been while in the Metropolitan Hospital, for permission to publish these cases.

Two Instructive Cases of Appendicitis.

By E. PERCY PATON, M.S., F.R.C.S.

I HAVE thought the two cases narrated below were worth recording, as they illustrate some points of clinical importance in appendicitis, which, though not unknown to those well acquainted with the disease, are perhaps not as well known as they might be.

J. S—, male æt. 19, was admitted into hospital on September 13th with the history that he had been suddenly attacked with acute abdominal pain the day before, accompanied by vomiting. His bowels had not been open for twenty-four hours, and he was doubtful if he had passed any flatus.

He was a good deal collapsed, and shivered a little; his temperature was 96° F., respirations 32, pulse 80 and small. On examination of the abdomen it was not found to be very tender, and the pain was not definitely localised; it was also a little full, but not distended; there was an inguinal hernia on the right side, and as this was somewhat tense and also of recent appearance its strangulation was thought to be the cause of his symptoms. A very slight amount of taxis easily effected its reduction, and the house surgeon did not think it necessary to ask me to see the case, particularly as during the next few hours his vomiting stopped and he seemed distinctly better.

Next day, however, he had more pain, and I was sent for. I found the lad complaining of no particular pain, and apparently fairly comfortable. His pulse was regular and of fair volume, his breathing easy, and there had been no more vomiting. On examining the abdomen it was found to be full, but not distended, and moving easily; on palpation it was not tender anywhere, and there was no rigidity of the muscular wall even on deep pressure; the right iliac fossa was particularly carefully examined, and although it was quite easy to get deeply into it the boy complained of no tenderness; his bowels were still not open, but the hernial rings were all quite free.

Examination of the rectum was negative. As there seemed no sufficient ground for opening his abdomen nor any very clear indication of the nature of his case I ordered him a turpentine enema, and said that I wished to see him again if there were any more acute abdominal pain.

I was called to see him again in about eight hours' time; he was now evidently in a good deal of pain; the enema had produced no result; there was no vomiting, but the abdomen was a little more full and a little tender, but not specially over the right iliac region; he was otherwise much as when seen before; it was, however, decided to open the abdomen. This was done at once over the right iliac fossa, and on opening the peritoneum an ounce or two of almost clear fluid at once escaped. The appendix was then looked for and easily drawn into the wound, there being no adhesions; it was noted to be much engorged and to contain a concretion, and to be obviously acutely inflamed, but there was no perforation. It was removed in the usual way, and a further opening having been made in the middle line the whole peritoneal cavity was thoroughly cleansed by sponging; a tube was then put deeply into the pelvis from the median wound, and the iliac wound was plugged with gauze. The operation was done in the middle of the night, and, unfortunately, no specimen of the fluid from the abdomen was kept for examination, so the exact nature of the infection is not known.

For the first day or so the boy improved, but it was soon seen that the course of the general peritoneal inflammation had not been stopped, and he soon began to go downhill, and died four days later. No autopsy was allowed. Possibly it would have been better to have thoroughly flushed out the abdomen instead of relying on sponging only; but my own experience has been rather in favour of the latter in these cases.

The second case was that of W. S. K—, male æt. 27. He was admitted into hospital on October 8th, 1901, with the history that he had had an attack of appendicitis in 1900, about fourteen months before; this went on to suppuration, and three weeks after its commencement an abscess formed which was opened and drained by a tube six inches long for four weeks, and the opening plugged with gauze for three weeks more; the appendix was not removed at the operation.

In the early part of 1901 he began to notice some bulging of the scar and also a swelling in the right groin, which proved to be an inguinal hernia. He was anxious to have both these troubles attended to, and also to have the appendix removed, in view of the fact that he was returning to India, where he might not be able to get skilled attendance if he had a return of the appendix trouble.

I undertook the cure of his two hernias, but told him I was doubtful as to the wisdom of dealing with the appendix, as one was a good deal in the dark as to the condition of parts after the prolonged suppuration, and he had had no further attacks.

On October 12th an incision was made over the old scar and extended inwards over the inguinal canal; the inguinal hernia was then dealt with, and on passing the finger in through the ring, as far as could be made out, there were no adhesions; the radical cure operation was thus completed. The old scar was now opened up, and it was at once found possible to draw out the cæcum and appendix through the two-inch opening; around the appendix itself there were no adhesions, and there were only one or two very thin ones of the omentum to the cæcum and to the abdominal wall, which were tied and divided, and the appendix was then removed in the usual way, the abdomen being closed by uniting the various strata of its wall layer by layer. The subsequent history of the patient was one of uninterrupted recovery.

Examination of the appendix showed no signs of old perforation, but as the mucosa was a little ulcerated, and in its lumen were three concretions (one being of very considerable size), it was evidently in a condition when further trouble might have been expected.

The first of the two cases illustrates the very great difficulty that there may be in the diagnosis of some of the very gravest of abdominal troubles. That a period of quiescence often succeeds the sudden onset of an acute peritonitis is well known, but that this

period of quiescence should be attended with no rigidity of the abdominal muscles, which has been said by some surgeons recently to be the one sign which is never absent, and that there should also be no tenderness, even to deep pressure, in the iliac fossa is at least very unusual, and is instructive as showing how, in some of these cases, the local signs may be so poorly marked that it is only by taking a general view of the case that a right conclusion can be come to. The low pulse rate and normal temperature, though unusual, are not so infrequently seen; and although the pulse, as is very well known, is, generally speaking, the best guide in this class of case, the fact that it is not rapid must not be allowed to mislead one as to the true condition of matters.

Both cases illustrate once more the now well-known fact that perforation of the appendix is not a necessary antecedent to its inflammation, giving rise to either a general peritonitis or a local suppuration.

The second case also shows what, from a treatment point of view, is of very great importance, namely, how very little influence even prolonged suppuration may have in what used to be considered the usual result of such a process, namely, the destruction of the appendix and so the prevention of future attacks.

It therefore emphasises the practice which is becoming more and more the rule in dealing with all these suppurating cases, that in every case, unless there is some very weighty reason to the contrary, such as softened gut, and therefore danger of tearing it, or great density of adhesions, the abscess should not be merely drained, as used to be done, but that the appendix should be removed at the same time. This, I think, can usually be done without any appreciable increase of risk by patience and carefully closing off the general peritoneal cavity with gauze packing to prevent its contamination. The removal of the appendix not only removes a source of future trouble, but also usually lessens the time which the abscess cavity takes to close.

The almost complete absence of adhesions is interesting as showing once more to what an extent peritoneal adhesions may disappear with time, as there can be no doubt that at the time of the abscess there must have been sufficient adhesions to cut off the general cavity entirely, but these had quite melted away.

Three Cases of Idiosyncrasy to Drugs (Iodoform and Cocain) applied externally.

By E. W. G. MASTERMAN, F.R.C.S., D.P.H.(Cantab.), Jerusalem, Syria.

THE three cases narrated below appear to me to be worth recording, as with drugs in such constant use as iodoform and cocain one is apt to overlook the danger of disagreeable consequences following their external use. Cocain used hypodermically or as a spray, and iodoform in closed cavities, not so uncommonly are followed by symptoms of semi-poisoning; but in these cases the applications were external, the doses very small, and yet the symptoms following most troublesome, not to say alarming.

It is the more interesting that all these cases occurred within one month.

CASE 1.—*Alarming collapse following application of cocain to the anal mucous membrane.*

K—, æt. 32, a strong and well-developed man of Hebrew origin, with no organic disease of heart or lungs, was operated on for internal hæmorrhoids on October 23rd. He took chloroform well, and I ligatured four large "piles." On October 30th he left the hospital cured.

On November 9th he came to me complaining of two small "external piles" which were irritating him. As he was evidently troubled about them, I offered to snip them off for him at once, and for that purpose applied a small piece of absorbent wool soaked in about a drachm of 20 per cent. cocain solution. After an interval of five minutes I removed the piles with two cuts of the scissors; he appeared to feel it a little, and almost immediately became faint. After holding his head between his legs a few minutes and giving him some ether and sal volatile, I was about to apply a bandage, when suddenly he became intensely pallid, quite pulseless, and really as if dying. I quickly laid him flat on the floor, where for three quarters of an hour he remained in this condition in spite of brandy and ether. The pulse from time to time returned at the wrist, only to die away again. After this he slightly revived and could answer questions, and I removed him to another room, but in the process he again went off with a severe syncope. On being brought to, he muttered that he only wanted to be allowed to sleep; he was left outstretched on the floor for another hour, and then carefully removed to the hospital and put to bed. On arrival his pulse was still weak and he was practically unconscious. It was not for five hours after the first application of the cocain that he came to, but after a good night's rest he was as well as ever.

He states that from the moment of my using the scissors up till five hours later, when he found himself in bed in the hospital, he had not the faintest recollection of anything that happened. He has never fainted before nor since, and I think there can be no doubt but that in his case the very small amount of cocain he had absorbed from this mucous membrane must be accountable for all his symptoms.

CASES 2 and 3.—*Acute erythema following the external application of a small quantity of iodoform powder.*

Case 2.—R—, æt. 8, a Hebrew, who had been suffering some two or three years from chronic right otitis media, came under my care November 19th, and under my directions had his ear syringed out with Lotio Acid. Boracic., after which a very small quantity of iodoform was blown into the external meatus. Half an hour after his return home, less than an hour after his being seen, he complained of pain in the right side of his face, which became rapidly red and œdematous. The next morning when I saw the boy he appeared at first sight to be suffering from acute erysipelas. The whole of the right side of his face was red and œdematous: there were several large vesicles on the pinna and cheek, and a rosy well-defined blush spread down his neck below the ear. The eyelids were very œdematous. His temperature was, however, normal, and there was little constitutional disturbance. I admitted the boy to our hospital, and the inflammation rapidly subsided, leaving some chronic eczematous patches on face and over pinna of ear. Ten days later, when he was about to be discharged, the ward sister, not knowing what had been the cause of the original trouble, put a very little iodoform again into the ear. This was followed by a very rapid recurrence of the symptoms in a slightly less severe form, though the œdema of right eyelids was sufficient to close the eye for some hours.

Case 3.—B—, æt. 16, a Hebrew, came to me October 21st, and had an ingrowing toe-nail removed under cocain; sal-alembroth gauze was applied afterwards. Attending the out-patient department he, on October 26th, had a little iodoform powder dusted on tha surface of the wound—a very small surface by this time: this was followed by a most violent reaction of the skin, the lower part of the foot with all the toes being intensely inflamed. Bullæ formed on the toes and instep, and the whole inflamed area desquamated. Under treatment with dry starch and boracic powder he gradually improved, and was discharged from the hospital November 11th. When attending the out-patient department my colleague, not knowing what had happened, ordered some iodoform ointment. The first application of this led to immediate recurrence of all the symptoms. He had to be again in hospital till December 1st, when he was discharged cured.

These two cases (2 and 3) illustrate how extremely small a quantity of iodoform may produce symptoms in the susceptible, and also, as is usual in such cases, that the inflamed area is very much larger than the part actually sprinkled with the drug. The unfortunate and quite accidental double repetition of the dose in both cases has the compensatory advantage that it makes the diagnosis morally certain.

It is rather important to be on the look-out for such cases, as to inform the patient of his idiosyncrasy may save him much discomfort. Looking back I feel sure one or two perplexing cases I have seen, and not diagnosed, may have been due to iodoform.

A case very similar to Case 3 is recorded on p. 321, vol. xxix, *St. Bart.'s Hosp. Reports*, by Dr. S. West. Of it he says, "Possibly, I suppose, it might be referred to the iodoform."

A much more interesting case of long-tested susceptibility to iodoform in a monthly nurse is recorded by Dr. H. H. Watkins, of Kimberley, South Africa, in the *Brit. Med. Journ.*, vol. i, 1899, p. 1214.

The cocain case presents the usual features of such cases, but I imagine it is uncommon to have such acute symptoms in a particularly strong and healthy patient from absorption from an intact external mucous surface. Perhaps the operation in the neighbourhood seventeen days before made the surface specially absorbent.

Notes on the Analysis of Urine, with Special Reference to that of Fever.

By G. C. GARRATT, M.B.

IN the course of a somewhat protracted study of the urine of fever, I have encountered certain analytical difficulties not met with when normal urine is used. The methods which I have found useful in surmounting these obstacles, and therewith other practical hints, form the subject of this paper.

(A) ANALYSIS OF THE INORGANIC CONSTITUENTS.

1. *Acidity.*—For the simple direct method free dilution is necessary owing to the high colour of febrile urine. Take 20 c.c. and dilute to 200; further, always make up a second sample similarly diluted for purpose of comparison. Phenol-phthaleïn gives only a pale salmon-pink with monohydrogen phosphates, therefore the first change of colour must be taken. There are bodies in urine, specially of fever, which decolourise phenol-phthaleïn, therefore add plenty.

2. *Chlorine.*—Methods involving decarbonisation by heat are peculiarly unsuited to the highly carbonised urine of fever. Particularly to be avoided is that which combines with decarbonisation addition of a salt of ammonium. The direct method of Möhr is much less accurate in febrile than normal urine, but is useful as a preliminary to that of Volhard. The latter requires modification, as not only does the high colour of these urines seriously mask the end reaction, but in them the chloride of silver often obstinately refuses to be filtered off. Now filtration is essential, as thiocyanate dissolves the precipitate. Decolorisation to pale straw-colour with potassium permanganate after the addition of nitric acid, as employed by Arnold, is a great improvement, and with normal urine leaves nothing to be desired. In dealing with febrile urines, however, it is desirable to first raise to near boiling after the addition of the acid, cool till comfortable to the hand, and then decolourise with permanganate. All difficulties of the process are thus removed. Filtration becomes easy, and the end reaction very delicate. The urine must not be boiled with permanganate and nitric acid. Never give results in terms of NaCl if you have not also estimated Na.

3. *Phosphoric acid.*—It is frequently desirable to dilute febrile urines before this analysis. A rough guide to the P_2O_5 present will often be given by the acidity in terms of oxalic acid, for it is a curious thing that urine is commonly much more acid than its acid phosphate would be to the same indicator. The best standard phosphate is KH_2PO_4, as it contains no water. I have found cochineal far inferior as indicator to a saturated solution of potassium ferrocyanide. Always standardise your uranium; its weight cannot be relied on.

In estimating acid phosphate by the method of Freund and Lieblein add an excess of uranium before heating in the preliminary trial, otherwise barium phosphate will come down.

4. *Sulphuric acid.*—Do not attempt this volumetrically, it is weary work. If, however, you must, estimate urea first; this will commonly give you some indication of what to expect. For the gravimetric method free dilution is, in the case of febrile urines, essential. Take 25 c.c. and 1·5 c.c. hydrochloric acid. After conversion of the ethereal sulphates make up to 150 c.c. and precipitate hot. The precipitate will then be clean, and there will be no excess of acid. Leave twenty-four hours before filtering, and wash by decantation. For the ethereal sulphates take more urine and dilute it less, as a good deal of pigment is removed by the first filtration, and the precipitate is small.

5. *Sodium and potassium.*—If you use Lehmann's process read his own description of it;* it has suffered in transcription. Febrile urines are rather troublesome owing to their high percentage of carbon and small percentage of bases. The carbon, by the way, comes almost entirely from the pigment and extractives. Never over-heat the carbon, or the dish will suffer; break it up and exercise patience. A further trouble arises later as the barium precipitate consists largely of phosphate, forming a bulky jelly quite impossible to wash. Leave the beaker under a bell-jar for four or five days, and the precipitate will become granular or powdery and present no difficulty. With normal urine this trouble does not arise. The platinum analysis is easy with these febrile urines owing to their small content in sodium. It is convenient to have the solution made up in terms of sodium chloride. ·156 Pt to the c.c. = ·1 NaCl. Add 1 c.c. for each ·1 gramme of total chlorides, and you cannot go wrong. Alcohol-ether mixture is to be preferred to alcohol. I have devised a simpler method of estimating Na and K, as well as a slight modification of Lehmann's process.*

6. *Ammonium.*—Febrile urines should be left long if Schloessing's method is used. Shake with chloroform, filter and put up for six days. More convenient than the usual apparatus is a squat, flat-bottomed cylinder inverted over a round glass plate. These may be piled in column one on another, and occupy little space. Never add formalin, it fixes the ammonia.

7. *Calcium and magnesium.*—If the ordinary method be applied to a febrile urine a mass of urate of ammonium is usually thrown down. To avoid this, first saturate the urine with Na_2HPO_4. Magnesium is indeed incompletely precipitated even from normal urine unless phosphate be added. Probably the most accurate method of estimating Ca and Mg in febrile urine would be to conduct the analysis on the ignited residue.

(B) ORGANIC BODIES.

1. *Total nitrogen.*—The most convenient of the modifications of Kjeldahl's process is that recommended in *Analyse des Harns*, potassium sulphate and sulphate of copper being added to the sulphuric acid. If distillation is done in an Erlenmeyer's flask upon a thin sheet of iron covered by a little asbestos wool, no bumping occurs. It is best to add the soda, after all is fixed up, through a special tube. Before doing this analysis it is convenient to estimate urea by the simple method. One then knows what to expect, and can arrange accordingly. If in making up standard soda the solution be first allowed to stand with a small addition of baryta, and then be standardised, it will possess the advantages of baryta without its drawbacks. Pure litmus in the cold is extremely sensitive to such a solution, one drop of it, where 1 c.c. = ·0005 N, producing a change.

2. *Urea.*—If Bohland's reagent (phospho-tungstic and hydrochloric acids) be used to remove extractives, more is required for febrile than for normal urine. This reagent precipitates much of if not all the ammonia; it precipitates urea also from strong solutions; finally it precipitates urea from weak solutions in the presence of formalin. Some years ago I found no urea in a case of acute mania. Formalin had been used.

If Mörner and Sjogvist's method is used there seems to be difference of opinion as to the necessity for adding magnesia to remove ammonia. If it is added the resulting hydrate causes most troublesome bumping in the distillation. Personally I leave it out, but add a little more baryta towards the end of the evaporation. I have tested this on an artificial urine containing much ammonia with excellent results; no ammonia remained in.

3. *Uric acid* by Hopkins's method. The following hints may be useful. Put the full quantity of NH_4Cl straight into the beaker (half the volume of the urine of the powder as sold will commonly suffice, but a fresh sample of NH_4Cl should be tested before it is used, as samples differ) and add the urine to it. Don't filter till the fluid is quite clear. Wash off with hot 5 per cent. hydrochloric acid instead of water, and add no more acid. After filtering and washing the uric acid spread the paper on a larger short-stemmed funnel, and wash straight into your flask. Put your sodium carbonate in the beaker, wash it out over the same funnel, and make up to 100 c.c. previously marked. Impure sulphuric acid precipitates uric acid, so does pure acid in the presence of magnesium sulphate, so don't try adding the latter in order to avoid washing away hydrochloric acid.

In most urine analysis it is a great convenience to make up the sample before analysis to a round number of c.c.

A little rectified spirit quickly removes froth, and also washes down precipitates which tend to creep.

In all the above hints I have necessarily assumed that the reader is acquainted or can make himself acquainted with the method under consideration. They are merely intended to supplement ordinary sources of information. I therefore omit all methods of which I have not practical experience.

LONDON FEVER HOSPITAL.

* 'Ztschr. f. physiol. Ch.,' viii, 508.

* To be published shortly in the 'Journal of Physiology.'

Pulmonary Tuberculosis in Father and Son cured by Development of Uricacidæmia.

By WILLIAM WYLLYS, M.R.C.S., L.R.C.P., L.S.A.

THE aversion that the tubercle bacillus has for nitrogenous compounds, and the curative influence that such bodies as urea and uric acid appear to have over tuberculosis, are so well brought out by the following cases that I feel emboldened to publish them, especially after reading the most instructive article by Dr. Henry Harper, "Pure Urea in the Treatment of Tuberculosis," in the *Lancet* of December 7th, 1901.

CASE 1.—T. G—, male æt. 22 years, recently married, suffered at end of June, 1899, from an attack of tracheal and bronchial catarrh, which, after some ten days' duration, was noted to be accompanied by falling off of appetite and occasionally a rise of temperature, 100° F., in the afternoon. Rhonchi at first were to be heard widely distributed through both lungs, but at end of three weeks moist râles were detected in upper third of left lung, and could be heard both anteriorly and posteriorly. The sputum, at first yellow, became green and nummular, and was streaked at times with blood. Night sweats were complained of, and the patient stated that during this attack he had lost a stone in weight, which I verified.

From age of sixteen years he had been subject to headaches with pain in back and the passage of urine, which deposited a thick pink sediment.

From his earliest boyhood he had repeated attacks of bronchial catarrh, especially in the winter, sometimes accompanied by aphonia.

On July 21st I came to the conclusion that my patient was suffering from phthisical catarrh of apex of left lung; the sputum was stained and found to contain tubercle bacilli. A few days later pleuritic pain in upper part of left chest was complained of.

On July 29th a consultation with a physician was held, and a diagnosis of pulmonary catarrh of tubercular variety arrived at, the patient forthwith being placed upon open-air method of treatment with what appeared a magical result, for in three days' time the afternoon temperature had become normal and the cough less, and a week later the night sweats had considerably diminished, as also the amount of sputum. I had been administering thiocol in fifteen-grain doses thrice daily for a fortnight, and was inclined to believe that it had had something to do with the miraculous improvement in the case, freely admitting that the enforced rest, a full diet, and outdoor life in a tent were playing their part in the cure. I now am inclined to think the thiocol was of assistance by fixing the urea and uric acid in the tissues, and consequently augmenting the patient's gouty tendencies. After two weeks of open-air treatment (thiocol still being given) the catarrh in left apex had considerably abated, a few soft crackles on deep inspiration and deficient vesicular murmur being the only marked physical signs left; a week later patient's weight showed an increase of six and a half pounds.

For some weeks longer symptoms and signs in chest varied but little. A bilious attack occurred on September 22nd. At end of October patient's weight had increased to 11 st. 5 lbs., a gain, since commencement of illness, of 1 st. 5 lbs. The amount of sputum at this date was slight, chiefly expectorated first thing in the morning, but contained many tubercle bacilli; the afternoon temperature for many weeks had been normal. On November 15th the air sounds at both apices were almost equal, no adventitious sounds to be heard anywhere in chest; the cough, sputum, and night sweats had ceased, and patient was still gaining weight, and had acquired a healthy ruddy complexion; short walks were allowed, but nothing approaching vigorous exercise. Thiocol was discontinued at end of November, and patient went away for a month's holiday, apparently well. While away, unfortunately, he contracted influenza, which caused a return of cough and expectoration, and a loss in weight of 5½ lbs.; examination of chest, however, on January 19th, 1900, revealed nothing amiss. On January 24th patient was suddenly seized with an attack of left renal colic, and some blood-stained urine, containing uric acid, sand, and urates, was voided. Morphia was necessarily administered, and had to be repeated, as several colicky attacks ensued, each time followed by the passage of urine heavily laden with urates, and sometimes uric acid sand, and on one occasion containing a small uric acid calculus. This state of affairs continued for one week, when patient was able to get up and about again, and, as I told him at the time, "seemed all the better for his gouty attack." Slight indications of gout appeared from time to time, and on April 20th an acute attack of renal colic ensued, necessitating hypodermic injection of morphia. Urine was acid, contained deposit of urates, but no albumen.

For next three months no renal colic occurred, but anti-gout medicines were administered to meet the gouty symptoms (irritability, pain in back, and headache) he complained of. In June, 1900, on examination, no signs of active mischief were found in the chest, but a return of cough with night sweats ensued in October; but, as afternoon temperature was normal, and no adventitious sounds in chest were detected, this was regarded as a simple catarrh, and the patient shortly returned to his usual occupation, and has not required medical attendance since.

CASE 2.—T. G—, æt. 60, father of the patient above alluded to, a strong, rather plethoric individual, of considerable mental capacity, and a successful public speaker, informed me, to my intense surprise and interest, that he had suffered as a boy just as his son; that he had "a hole in one of his lungs," for which his doctors prescribed cod-liver oil, with the result that it healed. He, however, added that he had been a gouty subject all his life, and so prone was he to produce and eliminate uric acid and small uric acid stones in his early manhood, that he could not consume a glass of beer without immediately experiencing gouty symptoms, and frequently the almost immediate passage of gouty gravel. Of late years, by frequently soaking his tissues with salicylate of soda, he has prevented the formation of calculi, though at times has had renal colic, and often gouty headaches, and sometimes eczema.

A perusal of the history of these two cases of pulmonary consumption occurring in persons of a gouty diathesis, and the fact that the tubercular process abated in both when the tissues became sufficiently saturated with uric acid. will, I think, lead one to the inference that Dr. Harper's contention that urea and other nitrogenous products are antagonistic to tubercle bacilli is right; and further, that they actually destroy these bacilli, and in many instances act as much as a specific for tuberculosis as does iron for erysipelas or mercury for syphilis.

Notes.

H.R.H. THE PRINCE OF WALES was installed as President of the Hospital on December 4th. It is a cause for no little pride that His Royal Highness should have made our ancient institution the scene of his first official act under his new title.

* * *

NOTHING has done more to justify our name of the Royal Hospital of St. Bartholomew than the support which the three generations of the reigning house have given us; and by his speech in the Great Hall on taking office the Prince of Wales gave proof that, following the example of our most noble Patron, His Majesty the King, he would be no mere figure-head, but would be an active factor in the life and management of the Hospital, as the King has been for the past thirty-four years.

* * *

MR. HARRISON CRIPPS has been appointed Surgeon to the Hospital in succession to Mr. Willett.

* * *

MR. J. G. FORBES has been appointed Medical Officer to the Gold Coast Anglo-French Boundary Commission.

* * *

FOR the second year in succession the Hospital has a representative in the English Rugby Football team. Last year it was A. O'Neill; this year it is L. R. Tosswill. He has been chosen to play against Wales. He is to be

heartily congratulated on his success, and the Rugby Union complimented for making so sound a choice. He gets his International cap for his play in the Devon *v.* Rest of England match, in which game O'Neill also played, and was chosen as a reserve for the English team. Other Bart.'s Internationals have been A. Budd and R. Wilson.

* * *

E. MORGAN, of Guy's, has been chosen to play for Wales, so that the hospitals are well represented.

* * *

THE draw for the Hospital Rugby Cup appears on a later page, and it will be seen that we meet Guy's (the holders) in the first round. There should be a good and close game, and it is to be hoped that the team will be in first-rate training. The library has not seen the cup for many a long day.

* * *

So far the team has done very well, and would have done better but for unavoidable changes in its composition. Five matches have been won, three lost. H. B. Owen at centre three-quarter has proved a great acquisition, and K. S. Singh has also shown good form. We miss Ash at half, but T. O'Neill has been playing well there. The forwards are the same as last year, except for the last place, for which there is considerable competition.

Amalgamated Clubs.

RUGBY FOOTBALL CLUB.

ST. BART.'S *v.* UPPER CLAPTON.

This match was played at Winchmore Hill on November 9th, and resulted in a win for the Hospital by 1 penalty goal and 1 try to *nil*. Bart.'s lost the toss, and O'Neill kicked off, and the Hospital soon asserted their superiority forward, and getting the ball in the scrums gave plenty of chances to the three-quarters, and after several bouts of passing Owen was enabled to score after a good run by Carbin; Stone failed to convert. From now till half-time the Hospital were attacking, and were certainly unlucky in not scoring again. In the second half the visitors played up much better, and the game was evenly contested, and there was no scoring till Upper Clapton was penalised, and Stone kicked a fine goal. There was no further scoring, and Bart.'s won as stated above.

The Hospital outsides combined well, but should certainly have made more use of their opportunities in the first half; Corbin and Owen were especially good. The forwards were well together, and the heeling was much smarter than in former matches. O'Neill, Tosswill, and Izard were most prominent in the open. For the visitors, Laird and Sherwell outside, and Proudlock and McNeill forward, were most prominent. Teams:

St. Bart.'s.—E. S. Marshall (back); D. M. Stone, J. Corbin, H. B. Owen, G. D. Drury (three-quarters); W. H. Hamilton and T. O'Neill (halves); A. O'Neill (capt.), L. R. Tosswill, H. T. Wilson, H. E. Stanger-Leathes, J. Morris, A. Ryland, T. A. Izard, and W. R. Pooley (forwards).

Upper Clapton.—S. Laird (back); T. R. Treolar, H. M. Lawson, J. Sherwell, and G. T. Lloyd (three-quarters); G. S. Milne and F. H. Cockell (halves); M. R. Proudlock, E. M. Taylor, J. A. Milligan, J. C. Milligan, P. Glover, J. McNeill, A. K. Wilbraham, and N. W. Munro (forwards).

ST. BART.'S *v.* CROYDON.

This match was played at Croydon on November 2nd in fine dry weather, and both sides being well represented a close and fast game resulted. Croydon kicked off, and play was confined to our "25" for the first few minutes, and the Hospital were forced to touch down. After this the ball was rushed down the field, and Corbin getting possession from a scrum was enabled to score after a good run; Stone with a good kick converted. From now up till half-time play was very even, and mainly confined to the forwards, and Bart.'s crossed over leading by 1 goal to *nil*.

At the beginning of the second half the Hospital forwards were outclassed, and failed to get possession of the ball in the scrum. Thus the Croydon three-quarters were constantly attacking, and for some time nothing but good tackling kept them from scoring. Eventually Rushworth, following up his own kick, scored between the posts for Croydon, but Trollope failed to convert. After this reverse the forwards played up much better, and until call of time we were attacking for the most part; no further scoring took place, Bart.'s winning by 5 points to 3.

For the Hospital all the "outsides" played up well, and their tackling in the second half was the feature of the game. The forwards, although occasionally brilliant in the open, seemed to be slack in the scrum. Team:

G. D. Drury (back); D. M. Stone, J. Corbin, H. B. Owen, K. S. Singh (three-quarters); W. H. Hamilton and T. O'Neill (halves); A. O'Neill (capt.), L. R. Tosswill, H. T. Wilson, H. E. Stanger-Leathes, J. Morris, T. A. Izard, A. Ryland, R. M. Miller (forwards).

ST. BART.'S *v.* HARLEQUINS.

Played at Wandsworth on November 23rd, and the Hospital suffered their first defeat of the season. For the first half the game was very fast although the ground was rather greasy. Both sides attacked alternately, though the Hospital had perhaps the best of the exchanges, and on one occasion was unlucky not to score, Corbin crossing the line, but the try was disallowed. After change of ends the Harlequins had much the best of the game, and the Hospital forwards failing to get possession of the ball time after time in the scrum the opposing three-quarters were given plenty of opportunities and scored twice in quick succession, and one of the tries was converted. The Harlequins attacked for the most part till call of time, and only the sound defence of Marshall and Hamilton prevented the score from being much larger. The Harlequins were left winners by 1 goal and 1 try to *nil*.

The Hospital forwards fell off in the second half, as in the last match against Croydon, either through slackness or want of condition, and we hope this will not occur when the "cup ties" come round. Tosswill and Morris played well. Owen at three-quarters, although hurt early in the game, played pluckily to the end. Teams:

St. Bart.'s.—E. S. Marshall (back); D. M. Stone, J. Corbin, H. B. Owen, F. R. Carroll (three-quarters); W. H. Hamilton and T. O'Neill (halves); A. O'Neill (capt.), L. R. Tosswill, H. E. Stanger-Leathes, J. Morris, T. A. Izard, A. Ryland, C. R. Hoskyn, and A. J. Symes (forwards).

Harlequins.—W. W. Cresswell (back); W. D. Crombie, T. J. Wheeler, W. H. Devonshire, and H. T. H. Bond (three-quarters); A. D. Stoop and W. H. Newton (halves); W. L. Furrell, R. Curtis-Hayward, E. L. Hammond, D. Linton, F. A. L. Hammond, A. E. Stamp, A. C. T. Veasey, and H. O. Mills (forwards).

ST. BART.'S *v.* OLD LEYSIANS.

This match was played at Winchmore Hill on November 30th, neither side being well represented. A. O'Neill and Tosswill were absent from the Hospital team assisting Devon, and Singh was on the injured list. The visitors turned up late, so consequently the last stages of the game were played in semi-darkness. Bart.'s kicked off, and it was soon seen that the teams were well matched forward. The visitors pressed at the start, but a good kick by Stone brought relief, and play was confined to mid-field for some time. After this each side attacked alternately, but no score resulted. Once Sisterson got clean away from the visitors and looked certain to score, but Owen caught him up and collared him. Half-time arrived with no score. Just before this one of the visiting three-quarters was injured, and took no further part in the game. In the second half, the Old Leysians being one short in the scrum, Bart.'s had much the best of the game, and Owen scored twice in quick succession. Stone failed with the kicks. Bart.'s were attacking far the most till time was called, and the forwards heeling out well there were several good rounds of passing amongst the three-quarters, but no further score resulted, the Hospital winning by 2 tries to *nil*.

Considering A. O'Neill and Tosswill were away the forwards played very well, both in the tight scrums and in the open. The

combination of the outsides, in the second half especially, was very good, and there were several good rounds of passing. Team:

E. S. Marshall (back); D. M. Stone, J. Corbin, H. B. Owen, F. R. Carroll (three-quarters); W. H. Hamilton and T. O'Neill (halves); H. T. Wilson, H. E. Stanger-Leathes, J. Morris, T. A. Izard, E. C. Hodgson, J. M. Plews, A. Ryland, and C. R. Hoskyn (forwards).

ST. BART.'S *v.* ROYAL NAVAL COLLEGE.

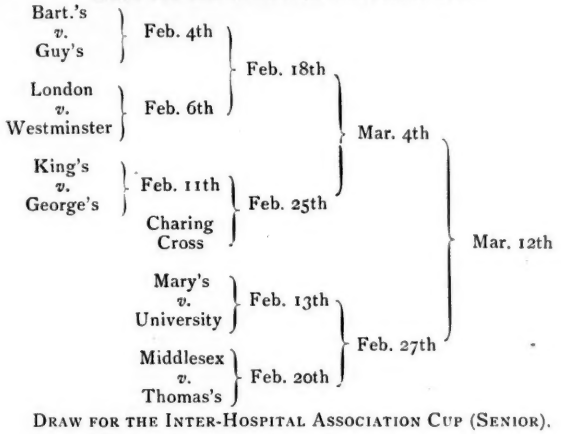
This match was played at Greenwich on December 11th, both sides being well represented. The Hospital sustained their second defeat of the season, being beaten by 1 goal and 3 tries to 1 try, but we certainly had more of the game than the score represents. O'Neill kicked off, and for the first ten minutes the Hospital were attacking, our forwards having the best of it in the scrum. After this the opposing three-quarters by good combination worked their way into the Hospital "25," and a try was scored between the posts; the kick at goal failed. Soon after this from a loose forward rush Tosswill scored for the Hospital far out, and Stone failed to convert. Just before half-time one of the visiting three-quarters, getting possession from a line out, scored after a good run; no goal resulted.

In the second half the Royal Naval College scored three times despite the good play of the Hospital forwards, who several times rushed the ball right up to the opponents' goal-line, but our three-quarters seemed unable to score. O'Neill, Tosswill, and Adam were especially prominent in the loose rushes. Time arrived leaving the Royal Naval College winners, as stated above.

The Hospital forwards in this match played better than in any match this season, but the three-quarters were very disappointing, and failed badly both in attack and defence. There was perhaps some excuse, as three of them had only recently recovered from injuries. Team:

E. S. Marshall (back); D. M. Stone, J. Corbin, H. B. Owen, K. S. Singh (three-quarters); W. H. Hamilton and T. O'Neill (halves); A. O'Neill (capt.), L. R. Tosswill, H. T. Wilson, H. E. Stanger-Leathes, G. H. Adam, J. Morris, T. A. Izard, and E. C. Hodgson (forwards).

DRAW FOR THE INTER-HOSPITAL RUGBY CUP.



DRAW FOR THE INTER-HOSPITAL ASSOCIATION CUP (SENIOR).

1st round—

A. London *v.* St. Thomas's.

To be played by Saturday, February 1st.

2nd round—

B. Winner of A *v.* Charing Cross.

C. St. George's *v.* St. Mary's.

D. Middlesex *v.* University.

E. Guy's *v.* St. Bartholomew's.

To be played by Saturday, February 15th.

Semi-final—

F. Winner of C *v.* winner of D.

G. Winner of B *v.* winner of E.

To be played by Saturday, March 1st.

Final—

Winner of F *v.* winner of G.

To be played by Saturday, March 8th.

First drawn has choice of grounds in first two rounds. Semi-finals and finals to be played on a neutral ground.

Abernethian Society.

THE eighth ordinary meeting of the session was held on November 28th, Mr. Shrubsall in the chair. Mr. Bainbridge read a paper on "Some Neuroses in Children."

His paper was largely based on cases which he had seen, more particularly at Great Ormond Street. In them he saw the results of modern conditions of life—nervous instability and neurosis. No macroscopic or microscopic changes had been demonstrated. The boundary line between these neuroses and some of the effects of poisons like strychnine was indefinite. Some neuroses led to insanity. Two classes might be formed, according to whether the neurosis affected children in the first two or three years, or in the later years of life. In the first category he placed—

(i) Spasmus nutans, characterised by singular nodding movements and by peculiar nystagmus, frequently in a rickety child four to twelve months old, in girls more often than boys. Recovery was invariable. The nystagmus was diagnostic, being usually monocular, vertical, and convergent. Its ætiology was obscure. Treatment was by bromides, tonics, and hygiene. He quoted a case of Dr. Gee's and four cases of his own.

(ii) Tetany was described with a reference to Trousseau's phenomenon. Anæsthesia did not stop the spasms. Treatment was by bromide of potash and chloral.

(iii) Laryngismus stridulus, occurring most commonly in children under one year, and (according to Dr. Gee) in spring and winter-time. Craniotabes was often present. Prognosis was fairly good. Diagnosis was from reflex spasm, congenital laryngismus, and laryngitis stridulosa. Treatment was by bromides and chloral, and, *si opus sit*, a finger in the fauces and water on the face. He suggested a toxic cause, adenoids and bronchial catarrh being frequently present.

(iv) Night and day terrors, most common in boys aged two to six years. Hallucinations were most commonly visual. Prognosis was good. Bromide of potash was often effective. The causes of the disease were divided by Coutts into the symptomatic and idiopathic. Under the former head Mr. Bainbridge suggested indigestion, worms, and adenoids; under the latter horrifying books and pictures, but doubted if there was any essential difference.

He concluded this part of the paper with a reference to certain febrile attacks which were of neurotic cause, and occurred (according to Still) either during teething or in an irregular way. In the cases of older children the neuroses were associated with rheumatism and neurotic taint. He gave enuresis as an example. It must be noted that control of micturition was normally acquired before the end of the second year. The causes were various, including phimosis, constipation, worms, excess of urates, acid urine, and small bladder. Cure was sometimes difficult. Tincture of belladonna, about ♏v for a child of six, was sometimes good. Electric treatment and coercion were also discussed.

Other examples were lienteric diarrhœa, hysteria, habit spasm, or tic convulsif.

The paper concluded with a summary of the subject, the points emphasised being nutrition, neurotic taint, condition of brain at birth, local irritations, and rickety cachexia.

The ninth ordinary meeting was held on December 5th, Mr. Danks in the chair. Mr. Atkinson read a paper on "The Law of Negligence in Relation to Medical Men." This paper will be reported in full.

The tenth ordinary meeting of the session was held on December 12th, Mr. Shrubsall in the chair. Mr. Scott read a paper on "Hæmorrhage." He began by a brief summary of the functions of the blood and a definition of hæmorrhage. Its effects arose either directly, as from loss of blood, or indirectly, as from pressure of extravasated blood. The factors in its production were three—injured vessels, blood-pressure, and morbid conditions of the blood. An example of all three was found in the cerebral hæmorrhage of granular kidney.

Having given an exhaustive list of the most important sites of hæmorrhage, he described its signs, symptoms, and general constitutional effects, quoting cases in illustration, and discussed the pulse and temperature. Next he dealt with the question of natural arrest, giving the ancient and the modern ideas about it, and with the process of regeneration of the blood. Death from hæmorrhage was due to mechanical causes, and occurred where the loss of blood was so great as to cause a permanent fall in general blood-pressure.

Slow-continued hæmorrhage was less likely to be fatal than sudden rapid loss of a smaller amount of blood. Treatment was to restore continuity of injured vessels, to reduce local blood-pressure, and to promote coagulation.

Various hæmostatic agents were described, including supra-renal extract, of which he gave a full account. Inaccessible hæmorrhage required special treatment, as by elevation of a limb and compression of a main artery. Venesection seemed paradoxical, but was indicated in cerebral hæmorrhage. Rest was especially important, but not always easy to obtain, *e. g.* in cases of hæmoptysis and hæmatemesis. Opium was generally indicated, except in cases of cerebral hæmorrhage. He gave an historical *résumé* of the subject of transfusion, quoting William Hunter, and described the methods of injection of fluids. The paper concluded with a summary of the subject in its relation to medical, surgical, and obstetric practice respectively.

The Rahere Lodge, No. 2546.

AN ordinary meeting of the Rahere Lodge, No. 2546, was held at Frascati's Restaurant, Oxford Street, W., on December 10th, 1901; W. Bro. Phin. S. Abraham, W.M., in the chair. Mr. Walton R. Read, L.D.S., Mr. Thomas B. A. Haggard. B.A.(Cantab.), Mr. Sydney L. Harke, B.A.(Cantab.), and Mr. Albert W. Griffin, M.R.C.S., L.R.C.P., were unanimously elected members of the Lodge, and Mr. Read was thereupon initiated into Freemasonry. W. Bro. John Peploe Cartwright, M.R.C.S., L.S.A., was also unanimously elected a joining member. Bro. Edge was passed to the Second Degree, while Bro. Keown was raised to the sublime degree of Master Mason. It was unanimously decided that the W. Masters of the Middlesex Hospital Lodge, the London Hospital Lodge, the Chère Reine Lodge, and the Cheselden Lodge should be entitled Honorary Members of the Rahere Lodge during their year of office. A proposal to present the jewel of a P.D.G.D.C. to W. Bro. Gripper, I.P.M., and that of a P.G.C. to W. Bro. Sir Borradaile Savory, Bart., Chaplain, was unanimously approved, and it was also resolved to contribute out of the Lodge funds the sum of ten guineas to each of the three masonic charities. The brethren and a mumber of guests subsequently dined together.

Calendar.

1902.

Jan. 15.—Mr. Langton's Clinical Lecture.
A.F.C. *v.* Richmond at Shepherd's Bush.
R.F.C. *v.* Royal Engineers at Chatham.
,, 16.—Abernethian Society. Mid-sessional Address.
Dr. Champneys on "Some Pages from Ancient History of Obstetric Medicine and Surgery."
,, 17.—Dr. Gee's Clinical Lecture.
On duty. Sir Lauder Brunton and Mr. Cripps.
,, 18.—A.F.C. *v.* St. Leonards at St. Leonards.
R.F.C. *v.* Catford Bridge at Winchmore Hill.
H.C. *v.* Guildhall at Manor Park.
,, 20.—Mr. Cumberbatch's Special Lecture.
,, 21.—On duty. Sir Wm. Church and Mr. Langton.
,, 22.—Mr. Langton's Clinical Lecture.
A.F.C. *v.* Casuals at Winchmore Hill.
,, 23.—Abernethian Society. Mr. C. E. West, "Some Innocent Tumours of the Breast."
,, 24.—Sir Dyce Duckworth's Clinical Lecture.
On duty. Dr. Gee and Mr. Marsh.
,, 25.—A.F.C. *v.* Tunbridge Wells at Tunbridge Wells.
R.F.C. *v.* Bedford at Bedford.
H.C. *v.* Uxbridge at Uxbridge.
,, 27.—Dr. Ormerod's Special Lecture.
,, 28.—On duty. Sir Dyce Duckworth and Mr. Butlin.
,, 29.—R.F.C. *v.* Rossyln Park at Winchmore Hill.
H.C. *v.* R.M.A. at Woolwich.
,, 30.—Abernethian Society. Mr. Litler Jones, "Concerning Arthritis."
,, 31.—Dr. Hensley's Clinic.
On duty. Dr. Hensley and Mr. Walsham.
Feb. 1.—H.C. *v.* Tulse Hill at East Dulwich.
A.F.C. *v.* Old Cholmleians at Winchmore Hill.
R.F.C. *v.* Northampton at Northampton.
Feb. 3.—Mr. Bruce Clarke's Special Lecture.
,, 4.—On duty. Sir Lauder Brunton and Mr. Cripps.
,, 5.—Mr. Butlin's Clinic.
H.C. *v.* Blackheath School at Blackheath.
,, 6.—Abernethian Society. Mr. W. Hamer, "The Diagnosis, Prognosis, and Treatment of Intussusception."
,, 7.—Sir Lauder Brunton's Clinical Lecture.
On duty. Sir Wm. Church and Mr. Langton.
,, 8.—A.F.C. *v.* Tonbridge at Tonbridge.
H.C. *v.* Royal Artillery at Woolwich.
,, 10.—Mr. Bowlby's Special Lecture.
,, 11.—On duty. Dr. Gee and Mr. Marsh.
,, 12.—Mr. Walsham's Clinical Lecture.
A.F.C. *v.* Eastbourne at Eastbourne.
,, 13.—Abernethian Society. Dr. Clive Riviere, "Tuberculosis in Children."
,, 14.—Sir Wm. Church's Clinical Lecture.
On duty. Sir Dyce Duckworth and Mr. Butlin.
,, 15.—A.F.C. *v.* Ewell at Ewell.
R.F.C. *v.* Portsmouth at Portsmouth.
H.C. *v.* Royal Artillery at Woolwich.

Examinations.

UNIVERSITY OF LONDON.

M.D. Examination.

Medicine.—E. V. Brown, J. E. G. Calverley, A. S. Cobbledick, M. W. Coleman, A. R. Cook, P. R. Cooper.

B.S. Examination.

Second-class Honours.—C. A. S. Ridout.

Pass List.

First Division.—C. A. S. Ridout. *Second Division.*—F. H. Noke, W. T. Rowe, H. S. Ward, E. E. Young.

Final B.Sc. Examination.

K. S. Wise, Second-class Honours in Physiology and Zoology.

UNIVERSITY OF CAMBRIDGE.

Medicine.—F. H. Beckett, J. G. Cooke, A. J. Fairlie-Clarke, H. Vaughan Pryce, F. Sanger, J. Stirling Hamilton, H. H. Weir, F. E. Wood.

Surgery and Midwifery.—J. F. Alexander, J. M. Bennion, R. B. Etherington Smith, C. L. Nedwill, J. E. Payne, H. Vaughan Pryce, R. M. Ranking.

Anatomy and Physiology.—S. H. Gibson, H. E. Graham.

Appointments.

CRABTREE, E. F., M.R.C.S., L.R.C.P., appointed Assistant House Surgeon to the Royal Surrey Hospital, Guildford.

* * *

FORBES, J. GRAHAM, M A., M.D., D.P.H., appointed Medical Officer to the Gold Coast Anglo-French Boundary Commission.

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ROBERTSON, J. F., appointed Assistant House Surgeon to the Royal Infirmary, Derby.

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TAYLOR, MARK R., M.R.C.S., L.R.C.P., appointed Medical Officer and Public Vaccinator to the Wendron District of the Helston Union, and Joint Surgeon to the Helston Dispensary.

New Addresses.

JORDAN, A. C., 33, Leadenhall House; and 1, Norton Folgate, E.C.

PEARCE, T. M., Tollmarsh, Buckfastleigh, S. Devon.

TAYLOR, MARK R., Cross Street, Helston, Cornwall.

WILDE, A. N., 29, Court Road, Barry Dock.

WINTER, L. A., Thalmsford, Southampton Street, Farnborough, Hants.

WRANGHAM, W., Cranborne Corner, Ascot.